

REMARKS

This is intended as a full and complete response to the Office Action dated December 18, 2009, having a shortened statutory period for response extended one-month set to expire on April 18, 2010. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1, 3-7, and 9-21 remain pending in the application and are shown above. Applicants have amended claim 1 to further clarify the invention, including the limitations from claims 10, 12, and 17 therein. Applicants have canceled claims 10, 12, and 17 without prejudice. Claims 1, 3-7, and 9-21 are rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claim Rejections Under 35 U.S.C. § 112

Claims 1, 3-7, 9-16, and 18-21 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner explains that Applicants' example, described in the original specification as filed and specifying an EO content of 0.0058 moles per 100 g of polymer contributed by the surfactant, coupled with Applicants' original disclosure and claims of EO content more than 0.006 moles per 100 g of polymer contributed by surfactant, does not support the claim to "at least 0.0058 moles". The Examiner's position appears to be that because Applicants have not disclosed the range between 0.0058 and 0.006, Applicants are not entitled to claim that range.

Although Applicants believe the original disclosure of examples over a broad range of EO contents, including one example at 0.0058 moles per 100 g of polymer, coupled with the original disclosure of "more than 0.006 moles" is sufficient to demonstrate the invention to a person of ordinary skill in the art, Applicants have nonetheless amended claim 1 to recite 0.006 moles as in the original claim 1.

Applicants have also amended claim 18 to respond to the Examiner's objection to the wording thereof. Applicants respectfully request the rejection be withdrawn.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 3-7, and 9-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Dempsey, et al.* (U.S. Patent 5,389,696, hereinafter "Dempsey") in view of *Parks, et al.* (U.S. Patent 5,500,176, hereinafter "Parks") or *Mackey* (U.S. Patent 5,670,553, hereinafter "Mackey I", or U.S. Patent 5,993,528, hereinafter "Mackey II") and further in view of *Gillis, et al.* (U.S. Patent 5,852,107, hereinafter "Gillis I", or U.S. Patent 5,916,939, hereinafter "Gillis II"). The Examiner maintains his rejection of the claimed invention on the basis that disclosed embodiments of Dempsey are "so close" to the claimed invention that one of ordinary skill "would have reasonably expected" the respective compositions to display the same properties.

Applicants have amended claim 1 to include the limitations of claims 10, 12, and 17. Applicants submit that Dempsey, Parks, Mackey I, Mackey II, Gillis I, and Gillis II do not make the claimed invention obvious. First, as Applicants have argued previously on the record, the references cited by the Examiner do not disclose all the elements of the claimed invention (see Response to Office Action Dated September 29, 2006, p. 8, ll. 14-16). In particular, no reference discloses a surfactant having the claimed properties contributing more than 0.006 moles EO per 100 g polymer. The Examiner has asserted that examples in Dempsey disclose the required EO content (see Final Office Action dated March 19, 2008, p. 4, ll. 15-18), but those examples are based on a surfactant that does not have the claimed surfactant properties. Thus, Applicants submit that a *prima facie* case of obviousness has not been established because at least some elements of the claimed invention have not been demonstrated as being part of the prior art.

Relying on *Titanium Metals*, the Examiner asserts that a person of ordinary skill would reasonably have expected the compositions of Dempsey to display the same results as the claimed compositions, and that it would have been obvious to an ordinary practitioner to increase the amount of surfactant based on the disclosure of Dempsey. The Examiner supports this position by referring to Applicants' own example as

evidence of the state of the prior art. Applicants submit that the Examiner is using hindsight analysis to reject the present claims over prior art by reading Applicant's disclosed invention into the prior art. Applicants submit that none of the cited references contain any information that would lead a person of ordinary skill to understand that increasing EO contribution from the surfactant would yield improved release results.

The Examiner asserts that because mold release properties have been "linked to" the polysiloxane surfactant in Gillis I and II, it "stands to reason" that increasing the surfactant would yield better results. The Examiner ignores the clear teaching of both Gillis I and II that it is the reaction of the polysiloxane surfactant with a carboxylic acid salt to produce an amide that produces the release performance observed in Gillis I and II (col. 3, lines 5-12). The Gillis disclosures admit that the polysiloxane surfactant has mold release properties when used alone (col. 3, lines 1-3), but it is hardly to be expected that a person of ordinary skill would understand from this that more of the surfactant would have better release properties. There is simply nothing in any reference to suggest such dependence.

Reading the disclosures of Gillis, Parks, Mackey, and Dempsey together would give an ordinary artisan the idea that adding a reaction product of pentaerythritol, adipic acid, and oleic acid, none of which has or contributes any EO structure, improves release results (Dempsey Tables 1 and 2; Mackey I and II col. 4, lines 51-55; Parks col. 3, lines 23-28), and that adding a polysiloxane compound to the mix to produce an amide from the reaction product above would produce further improvement (Gillis I and II col. 3, lines 5-12). Dempsey, in particular, clearly demonstrates that choice of surfactant is *immaterial*, because similar results are reported with L-6980 and L-5340 (Dempsey Tables 1 and 2). An ordinary artisan would not apprehend that adding *even more* surfactant than any reference teaches would have the surprising effect discovered by the Applicants. Nor would an ordinary artisan gather from Dempsey that one surfactant would work better than another.

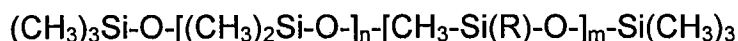
The Examiner cites *Greenfield*, *Kulling*, and *Grasselli* for the proposition that any time an applicant makes a showing of unexpected results, his claims must be limited to the precise scope of the results presented in order to overcome a *prima facie*

obviousness rejection. The cited cases, however, teach that the claim scope must be "commensurate in scope" with the showing of unexpected results. "Commensurate in scope" means that the evidence provides a reasonable basis for concluding that untested embodiments encompassed by the claims would behave similarly to the tested embodiments. See *In re Lindner*, 457 F.2d 506, 508 (C.C.P.A. 1972). The Examiner has provided no reason why the result obtained by Applicants would not be found in untested embodiments, such as those disclosed in the cited prior art references. In *Greenfield*, the applicant's assertion of unexpected results was unsupported by actual test results. *Greenfield*, 571 F.2d at 1188 ("No specific test results regarding these 'formulations' are disclosed. Accordingly, appellants have not rebutted the PTO's prima facie case."). In *Kulling*, applicant attempted to argue unexpected results on the basis of chlorine and vanadium content produced by a claimed wash process, when the specification and claims were silent as to chlorine and vanadium. *Kulling*, 897 F.2d at 1149. In *Grasselli*, applicant's claims to "an alkali metal" were unsupported by a showing of unexpected results from sodium only, when the "alkali metal" limitation was critical to patentability. *Grasselli*, 713 F.2d at 741.

Applicants submit that the data submitted to show unexpected results is fully commensurate in scope with the claimed invention. Applicants have shown clear results over a range of examples that indicate a trend establishing the claimed invention. These results are amplified by concordant results from prior art, cited by the Examiner, that indicates no reasonable expectation of obtaining the results demonstrated by Applicants.

Applicants therefore submit that Dempsey, Parks, Mackey I and II, and Gillis I and II, alone or combined, do not teach, show, suggest, or make obvious a reaction system for producing a polymer comprising: a) a polyisocyanate composition selected from the group consisting of 4,4'-diphenylmethane diisocyanate ("MDI"), 2,4'-MDI, polymeric MDI, MDI variants, and mixtures thereof, b) a polyether polyol and a cross-linking agent different from the polyether polyol, c) an internal mold release composition, said internal mold release composition containing: i) a fatty polyester, and ii) a fatty acid which is different from the fatty polyester, d) a poly(dimethylsiloxane)-polyoxyethylene surfactant, and optionally e) a catalyst suitable for promoting a polymer-forming reaction

between the polyisocyanate composition and the polyether polyol and the cross-linking agent, wherein the polyisocyanate composition and the polyether polyol and the cross-linking agent are present in proportions suitable for the formation of the polymer, the poly(dimethylsiloxane)-polyoxyethylene surfactant is present in the reaction system in an amount such that the poly(dimethylsiloxane)-polyoxyethylene surfactant contributes more than 0.006 moles of EO per 100g of the polymer derived from the reaction system, and the poly(dimethylsiloxane)-polyoxyethylene surfactant has the following formula:



Wherein R= $-(\text{CH}_2)_3-\text{O}-[\text{EO}]_x-\text{R}'$, R' is selected from the group consisting of H and CH₃, x is a number from greater than 1 up to 24, m is a number from 1 to 25, and n is greater than 0, as recited in amended claim 1 and claims dependent thereon.

Applicants respectfully request the rejection be withdrawn.

Conclusion

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

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